REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 20, 24-29, 37, 38, and 93-95 are pending in the present application. Claims 20, 28, 29, 37, 38, and 93-95 are amended by the present amendment.

In the outstanding Office Action, Claims 20, 24-27, 29, 37, 38 and 93-95 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 5,623,605 to Keshav et al. (herein "Keshav") in view of U.S. Patent No. 6,119,167 to Boyle; Claims 28, 29, and 37 were rejected under 35 U.S.C. § 103(a) as unpatentable over Keshav in view of U.S. Patent No. 5,608,874 to Ogawa et al. (herein "Ogawa"); and Claims 20, 24, 25, and 93-95 were rejected under 35 U.S.C. § 103(a) as unpatentable over Keshav in view of U.S. Patent No. 5,706,434 to Kremen et al. (herein "Kremen").

Addressing the above-noted rejections, those rejections are traversed by the present response.

Claims 20, 28, 29, 37, 38, and 93-95 are amended to further clarify that the communication protocol of the local home network is different than a communication protocol of the global IP network and the non-IP receiving node has no IP address such that the non-IP receiving node and the transmitting node cannot directly communicate with each other. Also, in view of the Interview on October 13, 2003, some features originally recited in the preamble are shifted to the main body of the claims.

In the claims, because the non-IP receiving node does not have any IP address assigned to it, IP packets cannot be addressed to such a node. This non-IP receiving node is typically a home electronics device that has no IP compatibility. To enable the transfer of IP based audio/visual data from a transmitting node on the global IP network (Internet) to such a

non-IP receiving node on a local home network, the claimed data transfer control device is provided between the global IP network and the local home network.

To render obvious the claims, the reference must suggest or imply such a data transfer control device provided between the global IP network and the local home network. However, applicants submit the primary reference of Keshav actually fails to disclose any such data transfer control device provided between the global IP network and the local home network. Keshav mainly describes PC 100 for enabling communications between the connectionless network (Internet) and the connection-oriented network (ATM), which are two global networks, and Keshav fails to disclose any data transfer control device between a global network (Internet) and a local network (LAN) as should be apparent from Fig. 3.

For this reason, the functionality of the claimed data transfer control device is distinctly different from the functionality of Keshav's PC 100, and the differences are explicitly recited in the independent claims. Accordingly, these claims are not met by Keshav, because those differences cannot be accounted for by the actual disclosure of Keshav.

More specifically, regarding independent Claim 20, the claimed data transfer control device first establishes a connection on the local home network, and then transfers the IP based audio/visual data received from the transmitting node on the global IP network to that connection, while commanding the non-IP receiving node on the local home network to receive the IP based audio/visual data transferred through that connection by using a communication protocol depending on the local home network.

In this way, the non-IP receiving node can properly receive the transferred IP based audio/visual data, even though the transmitting node cannot directly communicate with the non-IP receiving node. Thereby, the non-IP receiving node only needs to carry out a connection establishing procedure with the data transfer control device and then receive any

data transferred through this connection as commanded from the data transfer control device, all according to the communication protocol of the local home network. By providing this data transfer control device, it becomes possible for the non-IP receiving node to receive the IP based audio/visual data, without understanding any IP command.

It should be apparent that Keshav completely fails to disclose such a data transfer control device between the local home network and the global IP network, and none of the secondary references Boyle, Ogawa, or Kremen can supplement this missing feature in Keshav.

The same reasoning also applies to dependent Claims 14-27 and to independent Claims 28 and 29, which share this feature of Claim 20.

In addition, in independent Claim 28, a communication path on the global IP network side is also established while the connection on the local home network is established, and a data format of the IP based audio/visual data is converted from a first data format depending on the global IP network to a second data format depending on the local home network before these data are transferred.

In this way, the non-IP receiving node can properly receive the IP based audio/visual data in a data format suitable for it.

Keshav also completely fails to disclose such a data transfer control device between the local home network and the global IP network, and none of the secondary references to Boyle, Ogawa, or Kremen can supplement this missing feature in Keshav.

Also, in independent Claim 29, a communication path on the global IP network side is also established while the connection on the local home network is established, and the IP based audio/visual data are encoded or decoded before these data are transferred.

In this way, the non-IP receiving node can properly receive the IP based audio/visual data in a suitably encoded/decoded form.

Keshav also completely fails to disclose such a data transfer control device between the local home network and the global IP network, and none of the secondary references to Boyle, Ogawa, or Kremen can supplement this missing feature in Keshav.

Next, regarding independent Claim 37, the claimed relay device receives a control message requesting the encoding/decoding of the data, and encodes/decodes the data received from the global IP network before transmitting these data to the local home network, just as in the data transfer control device of Claim 29.

Keshav also completely fails to disclose such a data transfer control device between the local home network and the global IP network, and none of the secondary references to Boyle, Ogawa, or Kremen can supplement this missing feature in Keshav.

Next, regarding independent Claim 38, the claimed control device collects attribute information of the transmitting and/or receiving nodes on the local home network, and notifies the collected attribute information to a device on the global IP network by using a network layer protocol not depending on the local home network. In this way, the device on the global IP network side can acquire the attribute information on nodes on the local home network in a suitable network layer protocol.

Keshav also completely fails to disclose such a data transfer control device between the local home network and the global IP network, and none of the secondary references to Boyle, Ogawa, or Kremen can supplement this missing feature in Keshav.

Next, regardin independent Claim 93, the claimed data transfer control device first establishes a connection on the global IP network, while reserving a communication path from that connection to another data transfer control device or the non-IP receiving node on the local home network, and then commands the transmitting node on the global IP network to transmit the IP based audio/visual data through that connection by using a protocol depending on the global IP network.

In this way, the non-IP receiving node can properly receive the transferred IP based audio/visual data, even though the transmitting node cannot directly communicate with the non-IP receiving node. This is a reciprocal case to that of Claim 20 discussed above. In this case, the non-IP receiving node does not need to do anything special other than just receiving the data transferred through the reserved communication path. By providing this data transfer control device, it becomes possible for the non-IP receiving node to receive the IP based audio/visual data, without understanding any IP command.

Keshav also completely fails to disclose such a data transfer control device between the local home network and the global IP network, and none of the secondary references to Boyle, Ogawa, or Kremen can supplement this missing feature in Keshav.

Next, regarding independent Claim 94, the claimed data transfer control device establishes a communication path from the global IP network side, while receiving a control message indicating a connection to be used for the IP based audio/visual data transfer to the non-IP receiving node, and then commands the non-IP receiving node on the local home network to receive the IP based audio/visual data transferred through that connection by using a communication protocol depending on the local home network.

In this way, the non-IP receiving node can properly receive the transferred IP based audio/visual data, even though the transmitting node cannot directly communicate with the non-IP receiving node. This is an alternative case to that of Claim 20 discussed above. In this case, the non-IP receiving node does not need to do anything special other than just receiving the data transferred through the connection as commanded from the data transfer control device. By providing this data transfer control device, it becomes possible for the non-IP receiving node to receive the IP based audio/visual data, without understanding any IP command.

Keshav also completely fails to disclose such a data transfer control device between the local home network and the global IP network, and none of the secondary references to Boyle, Ogawa, or Kremen can supplement this missing feature in Keshav.

Finally, regarding independent Claim 95, the claimed data transfer control device establishes a communication path to the local home network side, while transmitting a control message indicating a connection to be used for the IP based audio/visual data transfer from the transmitting node, and then commands the transmitting node on the global IP network to transmit the IP based audio/visual data transferred through that connection by using a protocol depending on the global IP network. This is a reciprocal case to that of Claim 94 discussed above. In this case, the non-IP receiving node does not need to do anything special other than just receiving the data transferred through the established communication path. By providing this data transfer control device, it becomes possible for the non-IP receiving node to receive the IP based audio/visual data, without understanding any IP command.

Keshav also completely fails to disclose such a data transfer control device between the local home network and the global IP network, and none of the secondary references to Boyle, Ogawa, or Kremen can supplement this missing feature in Keshav.

Accordingly, it is firmly believed that all of the pending Claims 20, 24-29, 37-38 and 93-95 are patentably distinct over the prior art of record.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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